REMARKS

Prior to this amendment, claims 1-51 were pending in the application. By this amendment, claims 2, 3, 12, 13, 16, 26, 27, 28, 29, 30, and 31 have been amended, claims 23 and 32-44 have been cancelled, and claims 11, 14, 15, 22 and 45-51 have been withdrawn from consideration. Claims 1-22, 24-31, and 45-51 are in the case.

All claims as presented herein are fully supported by the application as filed. Entry of the amendment is respectfully requested.

Applicants offer the following remarks in response to comments made in the Office Action. For clarity, the numbering scheme of the following sections mimics the numbering scheme of the sections of the Office Action.

1) Applicants thank the Examiner for noting on page 2 of the Office Action that process claims will be considered for rejoinder upon allowance of a product claim. Applicants also thank the Examiner for withdrawing the restriction requirement with respect to group III subject to the election of species for group I. As requested, Applicants hereby confirm election of species made by telephone on July 19, 2006, that is, election of electroluminescent device as species for the Group VII claims. Applicants make this election with traverse. Applicants believe that if a claimed compound is found to be novel, then all devices employing the claimed compound are also novel, and therefore present no further search burden on the Examiner. Moreover, Applicants understand that species selection is made for search purposes only, and that if the elected and searched species is found to be free of the art, the search will be expanded to the remaining species.

2) Unelected claims 23 and 32-44 have been cancelled. Applicants understand that claims 11, 14, 15, 22, 45-51 have been withdrawn from further consideration pending search of the elected species.

Applicants have not amended withdrawn claims to include matter from cancelled base claims from which such withdrawn claims depend, but would make any such necessary amendments when the search is expanded to include all species and withdrawn claims are again under consideration.

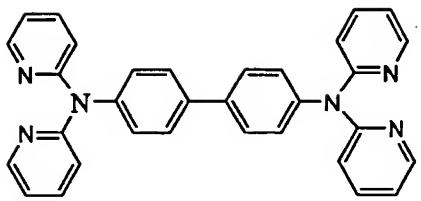
4) The Examiner has objected to Figures 15A, 15B and 21 as having numbers along the x- and y-axes that are not clearly readable. Applicants enclose replacement Figures 15A, 15B, and 21. We look forward to receiving confirmation of their suitability. No new matter has been added.

5) The Examiner has rejected claims 26-31 under 35 USC 112, second paragraph, as being indefinite. Originally, claims 26-31 recited a layer which is a compound as claimed in an earlier compound claim. The Examiner was of the opinion that in this instance the words "which is" were indefinite. Applicants do not agree, but in an effort to advance prosecution, Applicants have amended claims 26-31 to recite "comprising" instead of "which is" prior to "compound as claimed in...". Applicants respectfully request withdrawal of the rejection and reconsideration of claims 26-31.

8) Prior to discussing a novelty rejection of section 8 of the Office Action, Applicants submit the following discussion of the term "substituent". Applicants respectfully submit that the Examiner has used the term "substituent" in a manner that is not consistent with the art, and submit the following comments to clarify use of this term. A substituent is defined as "an atom or group of bonded atoms that can be considered to have replaced a hydrogen atom ... in a parent molecular entity (real or hypothetical)" in Chemistry Dictionary, David D. Hsu of Massachusetts Institute of Technology, www.chemicool.com (copy attached). A substituent is defined as "an atom or group that replaces one or more hydrogen atoms attached to a parent structure or characteristic group except for hydrogen atoms attached to a chalcogen atom" in *A Guide to IUPAC Nomenclature of Organic Compounds (Recommendations 1993)*, 1993, Blackwell Scientific, Boston (copy attached). As a replacement for a hydrogen atom, a substituent is attached to the parent structure via a lone attachment point. A portion of a molecule that is a bridge between two other portions of the same molecule, and which is attached to those portions through two attachment points (one attachment point per portion), is not termed a substituent. For example, if a molecule is described as A–B wherein B may be substituted, it is repugnant to the art to then insert a moiety in between A and B, forming A-C-B, and state that this new bridging moiety is the substituent of B.

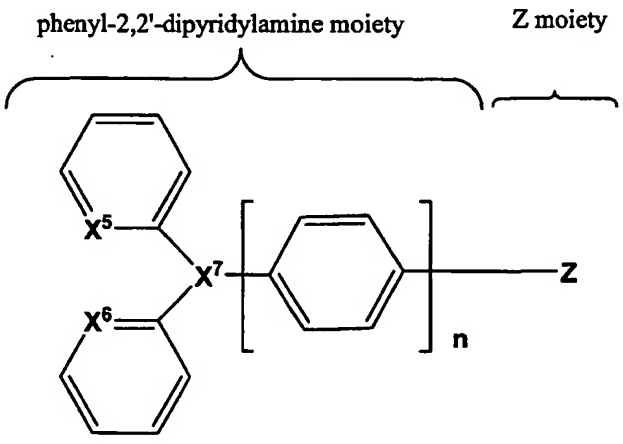
The Examiner has rejected claims 1-10, 12, 13, 17-21, 27 and 29-31 under 35 USC 102(b) as anticipated by JP 05-320634. Applicants traverse this rejection for the following reasons.

JP 05-320634 teaches molecules with the following symmetric core moiety:



[Formula 1]

In contrast, the present invention claims molecules with *non*-symmetric core moieties. Such a core moiety is depicted below in formula (1A) with portions labelled for the purpose of the present remarks:



(1A)

where Z is a substituted or unsubstituted aryl moiety selected from the group consisting of phenyl, biphenyl, naphthyl, anthryl, phenanthryl, pyrenyl, pyridyl, bipyridyl, indyl, and quinolynyl. As described below, JP 05-320634 does not teach or even suggest the non-symmetric core of formula (1A).

In structure (1A), a Z moiety is directly bonded to a phenyl-2,2'-dipyridylamine moiety. Although Z is described as substituted or unsubstituted, nevertheless Z is always directly bonded to the phenyl-2,2'-dipyridylamine moiety. For this reason, all compounds of present

formula (1A) have a non-symmetric core.

Applicants submit that claim 1 does not read on [Formula 1] of JP 05-320634. The Examiner had taken a moiety that is described as a possible substituent of Z and inserted it between Z and the phenyl-2,2'-dipyridylamine moiety. Applicants submit that such insertion is inconsistent with the standard definition of "substituent" as described above. Applicants respectfully request withdrawal of the rejection and reconsideration of claims reciting structure (1A).

The Examiner was of the opinion that JP 05-320634 anticipates compounds of formula (1B) of claim 2. Applicants respectfully disagree; however, in an effort to expedite prosecution, claim 2 has been amended. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 2.

The Examiner was also of the opinion that JP 05-320634 anticipates compounds of formula (1C) of claim 3 wherein either m is 0 and Z^2 is biphenyl substituted with an amino group; or m is 1, r is 0, and Z^2 is phenyl *substituted* with an amino group. Applicants respectfully disagree and submit that a substituent of Z^2 cannot be inserted between Z^2 and the phenyl moiety of formula (1C). Notwithstanding this, Applicants have amended claim 3 to recite r is a number between 1 and 4. Accordingly, Applicants respectfully request withdrawal of this rejection and reconsideration of claim 3.

As described above, Applicants submit that claims 1, 2, and 3 are not anticipated by JP 05-320634. Accordingly, Applicants submit that product claims depending from claims 1, 2, and 3 are likewise not anticipated by JP 05-320634. Accordingly, Applicants respectfully also request withdrawal of this rejection with respect to dependent claims 4-10, 12, 13, 17-21, 27, and 29-31 and reconsideration.

9) The Examiner has rejected claims 1-10, 12, 13, 20, 21, 24, 25, and 29-31 under 35 USC 102(b) as anticipated by Pang *et al., Journal of Materials Chemistry* (2002) **12**: 206-212 (Pang *et al.*).

Compound 1 and claim 1

The Examiner was of the opinion that compound 1 of Pang *et al.* meets the limitations of a compound "as defined in present claim 1 wherein each of X^5, X^6 and X^7 represents nitrogen, n is 0 and Z is phenyl *substituted* with amino groups". Applicants respectfully traverse. Compound 1 of Pang *et al.* does not meet the limitations of claim 1. Compound 1 of Pang *et al.* is not fully made by the Examiner's description, this description omits pyridyl groups on the amino groups that are attached to Z. When using the word "substituent" in a manner consistent

with the art, it would be appropriate to say that in Compound 1 of Pang *et al.*, Z is substituted by two dipyridylamino groups. Such substituents are not recited in claim 1. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 1.

Compound 1 and claim 2

The Examiner was of the opinion that compound 1 of Pang *et al.* meets the limitations of claim 2. Applicants disagree; however, in an effort to expedite prosecution, claim 2 has been amended. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 2.

Compound 1 and claim 3

The Examiner was of the opinion that compound 1 of Pang *et al.* meets the limitations of claim 3 wherein each of Z^3 and Z^4 represents a pyridyl group, m is 0 and Z^2 is phenyl substituted with amino groups. Applicants respectfully traverse. Compound 1 of Pang *et al.* does not meet the limitations of claim 3. Compound 1 of Pang *et al.* is not fully made by the Examiner's description, this description omits pyridyl groups on the amino groups that are attached to Z. When using the word "substituent" in a manner consistent with the art, it would be appropriate to say that in Compound 1 of Pang *et al.*, Z is substituted by two dipyridylamino groups. Such substituents are not recited in claim 3. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 3.

Compound 1 and claims 4-10 and 12

The Examiner was of the opinion that compound 1 of Pang *et al.* meets the limitations of the compounds defined in claims 4-10 and 12. As described above, Applicants submit that compound 1 does not meet the limitations of claims 1, 2, or 3. Accordingly, claims 4-10 and 12 which depend from 1, 2 or 3 are not anticipated by compound 1 of Pang *et al.* Applicants respectfully request withdrawal of this rejection and reconsideration of claims 4-10 and 12.

Compound 2 and claim 1

The Examiner was of the opinion that compound 2 of Pang *et al.* meets the limitations of a compound as defined in claim 1. In the Examiner's explanation, each of X^5, X^6 and X^7 represent nitrogen, and wherein either n is 0 and Z is biphenyl substituted with aryl groups or n is 1 and Z is phenyl substituted with an aryl group. Applicants submit that compound 2 of Pang *et al.* is not fully made by the Examiner's description. Actually, each of X^5, X^6 and X^7 would represent nitrogen, and wherein n is 0, Z is biphenyl substituted with two dipyridylaminophenyl

groups, or wherein n is 1, Z is phenyl substituted with two dipyridylaminophenyl groups. Applicants submit that a dipyridylaminophenyl moiety, that is, a phenyl bonded to a non-aromatic nitrogen atom in turn bonded to two pyridyl rings, is outside of the description of "aryl" commonly known in the art of the invention. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 1.

Compound 2 and claim 2

The Examiner was of the opinion that compound 2 of Pang *et al.* meets the limitations of claim 2. Applicants disagree; however, in an effort to expedite prosecution, claim 2 has been amended. Applicants request withdrawal of this rejection and reconsideration of claim 2.

Compound 2 and claim 3

The Examiner was of the opinion that compound 2 of Pang *et al.* meets the limitations of previous claim 3 stating that wherein each of Z^3 and Z^4 represents a pyridyl group, and wherein m is 0, Z^2 is biphenyl substituted with aryl groups. Applicants respectfully traverse. Compound 2 of Pang *et al.* is not fully made by the Examiner's description. Actually, when each of Z^3 and Z^4 represents a pyridyl group, m is 0 and Z^2 is biphenyl substituted with two dipyridylaminophenyl groups. Applicants submit that a dipyridylaminophenyl moiety, that is, a phenyl bonded to a non-aromatic nitrogen atom in turn bonded to two pyridyl rings, is outside of the description of "aryl" commonly known in the art of the invention.

The Examiner was also of the opinion that compound 2 of Pang *et al.* meets the limitations of previous claim 3 wherein each of Z^3 and Z^4 represents a pyridyl group, and wherein m is 1 and Z^2 is phenyl substituted with an aryl group. In current claim 3, r is a number between 1 and 4. In compound 2 of Pang *et al.* when n is 1 and Z^2 is phenyl, r is in fact zero, so compound 2 does not meet the limitations of current claim 3. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 3.

Compound 2 and claims 4-10, 12 and 13

The Examiner was of the opinion that compound 2 of Pang *et al.* meets the limitations of the compounds defined in claims 4-10 and 12. As described above, Applicants submit that compound 2 does not meet the limitations of claims 1, 2, or 3. Accordingly, claims 4-10, 12 and 13 are not anticipated by compound 2 of Pang *et al.* Applicants respectfully request withdrawal of this rejection and reconsideration of claims 4-10, 12 and 13.

Compound 4 and claim 1

The Examiner was of the opinion that compound 4 of Pang *et al.* meets the limitations of a compound as defined in present claim 1. In the Examiner's explanation, each of X^5, X^6 and X^7 represent nitrogen, n is 0 and Z is phenyl substituted with aryl group. Applicants respectfully traverse. Applicants submit that the Examiner is using the term "aryl" to describe a large moiety which includes a non-aromatic nitrogen and four non ring-fused aromatic rings. This is outside of the description of "aryl" commonly known in the art of the invention. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 1.

Compound 4 and claim 2

The Examiner was of the opinion that compound 4 of Pang *et al.* meets the limitations of claim 2. Applicants disagree; however, in an effort to expedite prosecution, claim 2 has been amended. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 2.

Compound 4 and claim 3

The Examiner was of the opinion that compound 4 of Pang *et al.* meets the limitations of previous claim 3 stating that wherein each of Z^3 and Z^4 represents a pyridyl group, m is 0 and Z^2 is phenyl substituted with an aryl group. Applicants respectfully traverse. Applicants submit that the Examiner is using the term "aryl" to describe a large moiety which includes a non-aromatic nitrogen and four non ring-fused aromatic rings. This is outside of the description of "aryl" commonly known in the art of the invention. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 3.

Compound 4 and claims 4-10 and 12

The Examiner was of the opinion that compound 4 of Pang *et al.* meets the limitations of the compounds defined in claims 4-10 and 12. As described above, Applicants submit that compound 4 does not meet the limitations of claims 1, 2, or 3. Accordingly, claims 4-10 and 12 are not anticipated by compound 4 of Pang *et al.* Applicants respectfully request withdrawal of this rejection and reconsideration of claims 4-10 and 12.

10) The Examiner has rejected claims 1-9, 12, 13, 20, 21 and 24-31 under 35 USC 102(b) as being anticipated by Inoue *et al.* (US 5,635,308).

Compounds I-7 and II-7, and claim 1

The Examiner was of the opinion that compounds I-7 and II-7 of Inoue *et al.* meet the

limitations of claim 1. Applicants respectfully traverse. Applicants submit that in order for compounds 1-7 and II-7 of Inoue *et al.* to meet the limitations of claim 1, two terms of art must be inappropriately used. Firstly, the term "substituent" must be inappropriately used in a manner that is not consistent with the art. As described above, "substituent" is used to describe a portion of a molecule that has replaced a hydrogen atom. It is not appropriate to use "substituent" to describe a moiety that is in a central position in a molecule and that branches off in several directions. Secondly, the term "aryl" must be inappropriately used to represent a large moiety which includes multiple non-aromatic nitrogens and non-fused aromatic rings. This use is outside of the definition of "aryl" commonly known in the art. "Aryl" is understood in the art to mean aromatic ring systems, and in the instant application it is defined on page 18, line 4, as further including heteroaryl ring systems. The inclusion of non-aromatic nitrogens in a moiety called "aryl" is not appropriate. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 1.

Compounds I-7 and II-7, and claim 2

The Examiner was of the opinion that compounds I-7 and II-7 of Inoue *et al.* meet the limitations of previous claim 2. Applicants disagree; however, in an effort to expedite prosecution, claim 2 has been amended. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 2.

Compounds I-7 and II-7, and claim 3

The Examiner was of the opinion that compounds I-7 and II-7 of Inoue *et al.* meet the limitations of previous claim 3. Applicants reiterate that if the terms "substituent" and "aryl" are used in manner consistent with their meanings as commonly understood in the art, compounds 1-7 and II-7 of Inoue *et al.* do not meet the limitations of current claim 3. Applicants respectfully request withdrawal of this rejection and reconsideration of claim 3.

Compounds I-7 and II-7, and claims 4-9, 12 and 13

The Examiner was of the opinion that compounds I-7 and II-7 of Inoue *et al.* meet the limitations of compounds defined in claims 4-9, 12 and 13. As described above, Applicants submit that compounds I-7 and II-7 do not meet the limitations of claims 1, 2, or 3. Accordingly, claims 4-9, 12 and 13 which depend from claims 1, 2, and 3 are not anticipated by compounds I-7 and II-7. Applicants respectfully request withdrawal of this rejection and reconsideration of claims 4-9, 12 and 13.

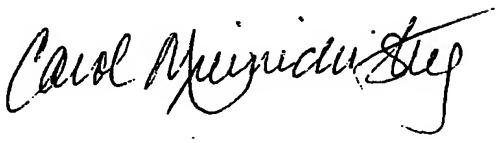
11) The Examiner has rejected claims 2, 3, 5-7, 12, 13, 16-21 and 24-31 under 35 USC 102(e) as being anticipated by Saito *et al.* (WO 2004/020388). Applicants do not agree; however, for the purposes of advancing prosecution, Applicants have amended claims 2 and 3. Applicants believe that current claims 2 and 3 are not anticipated by Saito *et al.* Accordingly, Applicants submit that claims which depend from claim 2 or 3 are also not anticipated by Saito *et al.* Applicants respectfully request withdrawal of this rejection and reconsideration of claims 2, 3, 5-7, 12, 13, 16-21 and 24-31.

The above amendments should not be construed as an acquiescence to any of the outstanding rejections and are being made for the purpose of expediting prosecution. Applicants reserve the right to file the same or similar claims in this application or another application.

Any fees that may be required in respect of this Response and Amendment may be charged to Deposit Account 17-0110.

In view of the foregoing, Applicants submit that the pending claims are now in condition for allowance and respectfully request same. Should the Examiner wish to discuss this Response and Amendment, or the application, she is requested to telephone Carol Miernicki Steeg, agent for applicants, at 613-533-2342.

Respectfully submitted,



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Definition of substituent

1. An atom or group of bonded atoms that can be considered to have replaced a hydrogen atom (or two hydrogen atoms in the special case of bivalent groups) in a parent molecular entity (real or hypothetical).

Introduction

R-0.2.2 Groups

R-0.2.2.1 ***Substituent atom or group:*** (formerly "radical"): an atom or group that replaces one or more hydrogen atoms attached to a parent structure or characteristic group except for hydrogen atoms attached to a chalcogen atom.

R-0.2.2.2 ***Characteristic group:*** a single heteroatoms, for example, —Cl and =O; a heteroatom bearing one or more hydrogen atoms or other heteroatoms, for example, —NH_2, —OH, —SO_3H, —PO_3H_2, and —IO_2; or a heteroatomic group attached to or containing a single carbon atom, for example, —CHO, —C≡N, —COOH, and —NCO, attached to a parent hydride. The most common of these groups are listed in Table 5 and Table 9.

R-0.2.2.3 ***Principal group:*** the characteristic group chosen for citation at the end of a name by a suffix or a class name.

Next:

R-0.2.3 Names
R-0.2.4 Other terms used in these recommendations

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